

## Claims

1. Method for producing a texture (2) on an arbitrarily curved surface (1) by removing material in layers (7), wherein the surface is described by at least one polygon network, and the polygon network can be divided into a number of partial surfaces, i.e. polygons (3), whereby the partial surfaces (3) describe a detail of the texture (2), by a number of pixels (4) which are associated with a gray level (5), and each partial surface (3) is provided with a distribution of grey levels (5) via a number of pixels, characterized in that each gray level (5) is assigned a distance value (6) which corresponds to the distance of the curved surface (1) in this pixel to the texture surface.
2. Method according to claim 1, characterized in that the distance value (6) determines the number of layers (7) from which the material is removed.
3. Method according to claim 1 or 2, characterized in that the distance value (6) can be a multiple of a thickness of a layer.
4. Method according to claim 2, characterized in that each of the layers (7) is described by its own polygon network.
5. Method according to claim 2, characterized in that each layer (7) is constructed from partial surfaces (19).
6. Method according to claim 5, characterized in that the partial surfaces are polygons.
7. Method according to claim 5, characterized in that the partial surfaces (19) of a layer (7) are bordering one another by means of shared border areas (13).

8. Method according to claim 7, characterized in that border areas (13) of the partial surfaces (19) of adjacent layers (97) are not superposed.
9. Method according to claim 8, characterized in that the partial surfaces (19) of adjacent layers (7) are offset relative to one another.
10. Method according to claim 8, characterized in that the partial surfaces (19) of adjacent layers (7) are rotated relative to one another.
11. Method according to claim 8, characterized in that the partial surfaces (19) of adjacent layers (7) are arranged at random.
12. Method according to claim 8, characterized in that the partial surfaces (19) of adjacent layers (7) are of different size.
13. Method according to claim 1, characterized in that the polygon network constructed from partial surfaces (19) is read into a control program of the removal agent (9).
14. Method according to claim 13, characterized in that the control program determines the areas to be worked (10) on.
15. Method according to claim 14, characterized in that one area to be worked on (10) comprises at least one partial surface (19).
16. Method according to claim 14, characterized in that the area to be worked on (10) is located within the focal area (11) of the removal agent (9).
17. Method according to claim 14, characterized in that the area to be worked on (10) is scanned line by line by the removal agent (9).

18. Method according to claim 17, characterized in that the removal agent (9) is switched on, when a pixel with a gray level (12) is detected in the layer (7) of the area to be worked on (10).
19. Method according to claim 17, characterized in that the removal agent is not switched on when no pixel with a gray level (12) is detected in the layer (7).
20. Method according to claim 1, 2 or 15, characterized in that for each partial surface (19) a different angle orientation is set for the removal agent (9).
21. Method according to claim 20, characterized in that the removal agent (9) impinges obliquely on the partial surface (19).
22. Device for the layer by layer removal of material from a body of a given topology (15) for producing of a three-dimensional structure (2) on the body of any topology, wherein the topology is represented by a polygon network (17), by means of which the topology can be modeled in a computer, so that a computer controlled removal agent can act point by point on the topology, in that the polygon network (17) which contains the information on the material removal is projected onto a polygon network (18), whereby the removal agent (9) in each polygon (19) of the polygon networks (18) is assigned to an area to be worked on characterized in that the area to be worked on (10) is described by at least one raster image (14) so that the removal agent (9), in accordance with the information stored in the raster image (14), removes that material in the areas to be worked on (10), whereby the sequence for each polygon (19) of the polygon network (18) is repeated.

23. Device according to claim 22, characterized in that the raster image (14) is produced by means of a scanning device, and the rastre image (14) which contains information about the point by point removal of material.
24. Device according to claim 22, characterized in that the area to be worked on (10) is located entirely within the focal area (11) of the removal agent (9).